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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/812,478

03/30/2004

Paul R. Austin

D/A2120

3268

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01/12/2007

EXAMINER

KO, TONY

ART UNIT

PAPER NUMBER

2878

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/812,478

Applicant(s)

AUSTIN, PAUL R.

Examiner

Tony Ko

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/30/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 16 is rejected under 35 U.S.C. 101 because claim 16 directed to a machine, however both process of using and machine is claimed.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 is dependent on a claim 16 which require a mirror to guide the light, however claim 17 calls for a direct light path. It is not unclear how light guided by a mirror could result in a direct light path.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 12-16, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim (US 20020021855).
3. Regarding claims 1 and 11, Kim discloses (Fig. 1) a system and method comprising: at least one light source (104c) and at least one light sensor (102c) associated with at least one component (84a) of a data-processing system; at least one other light source (104a) and at least one other light sensor (104c) associated with at least one other component (84b) of said data processing system; and wherein data is communicated between said at least one component and said at least one other component of said data-processing system by transmitting light from said at least one light source to said at least one other component of said data processing system by transmitting light from said at least one light source to said at least one other light sensor or from said at least one other light source to said at least one sensor.
4. Regarding claims 2 and 12, Kim discloses at least one light path patch established between said at least one component and said at least one other component of said data-processing system in order to communicate data by light among said at least one light source, said at least one sensor, said at least one other light source and said at least one other sensor.
5. Regarding claims 3 and 13, Kim discloses at least one light source and said at least one other light source each comprise an LED (Col. 4, Lines 50-55).
6. Regarding claims 4 and 14, Kim discloses at least one light source and said at least one other light source each comprise a VCSEL (Col. 4, Lines 55-60).

Art Unit: 2878

7. Regarding claims 5 and 15 Kim discloses at least one mirror (32) for guiding light emitted from said at least one light source to said at least one other light sensor or light emitted from said at least one other light source to said at least one light sensor.

8. Regarding claims 16, 19 and 20, Kim discloses a system comprising: at least one light source (104c) and at least one light sensor (102c) associated with at least one component of a data-processing system; at least one other light source (104a) and at least one other light sensor (104c) associated with at least one other component of said data processing system, wherein data is communicated between said at least one component and said at least one other component of said data-processing system by transmitting light from said at least one light source to said at least one other light sensor or from said at least one other light source to said at least one sensor; at least one light path (where the light is transmitted) established between said at least one component and said at least one other component of said data-processing system in order to communicate data by light among said at least one light source, said at least one sensor, said at least one other light source and said at least one other sensor; and locating at least one mirror (32) at an end of said at least one light path in order to guide light emitted from said at least one light source to said at least one other light sensor and light emitted from said at least one other light source to said at least one light sensor. Kim further discloses the use of LED or VCSEL as the light sources.

9. Claims 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Oezki (U.S. Patent 6,317,242).

Art Unit: 2878

10. Regarding claim 16, Oezki discloses (Fig. 1) a system comprising: at least one light source (42a) and at least one light sensor (42b) associated with at least one component of a data-processing system; at least one other light source (42a) and at least one other light sensor (42b) associated with at least one other component of said data processing system, wherein data is communicated between said at least one component and said at least one other component of said data-processing system by transmitting light from said at least one light source to said at least one other light sensor or from said at least one other light source to said at least one sensor; at least one light path (where the light is transmitted) established between said at least one component and said at least one other component of said data-processing system in order to communicate data by light among said at least one light source, said at least one sensor, said at least one other light source and said at least one other sensor; and locating at least one mirror (32) at an end of said at least one light path in order to guide light emitted from said at least one light source to said at least one other light sensor and light emitted from said at least one other light source to said at least one light sensor.

11. Regarding claim 17, as understood, Oezki discloses (Fig. 2) at least one component located directly opposite said at least one other component in order to form a direct light path between said at least one light source and said at least one other sensor and said at least one other light source and said at least one light sensor.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozeki in view of Dries (U.S. Patent 6,740,864).

14. Regarding claim 18, Ozeki discloses the invention set forth above. Ozeki does not disclose the components located perpendicular to each other. Dries discloses (Fig. 1) the components can be located perpendicular to each other and the signal can be delivered via a mirror. It is well known to place components perpendicular to each other and deliver the signals via mirrors. It would have been obvious to a person of ordinary skill in the art at the time of the invention to place components perpendicular and use mirror to redirect signals to better utilize the optical bus (by placing the boards on the two sides without the components, see figure 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Ko whose telephone number is 571-272-1926. The examiner can normally be reached on Monday-Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TKO



THANH X. LUU
PRIMARY EXAMINER